

REMARKS

A review of the claims indicates that:

A) Claims 1, 14 and 21 are currently amended.

B) Claims 6-8, 13, 15-20 and 22-29 remain in their original form.

C) Claims 2-5, 9-12 and 22 are cancelled.

D) New Claim 30 depends from Claim 1.

In view of the following remarks, Applicant respectfully requests reconsideration of the rejected claims and withdrawal of the rejections.

Examiner Interview

The Applicant would like to thank the Examiner for taking the time to interview this case. In particular, the Applicant would like to invite the Examiner to call the undersigned representative of the Applicant upon receipt of this Response, so that additional discussion can take place.

New Claim 30

The Applicant would like to point to new Claim 30, which depends from Claim 1. In the Interview, the Examiner expressed the opinion that such a claim was very likely allowable.

Claim Amendments and Cancellations

The Applicant has made a number of claim amendments and cancellations. These changes are not a reflection of an opinion of the allowability of any claim, or of the content, disclosure and/or teaching of the prior art of record. Instead, the changes reflect a desire on the part of the Applicant to advance the prosecution of this application, to reduce the expense and time of the pending period, and to

1 thereby expedite prosecution. The Applicant retains the right to file claims having
2 the same or similar scope at a future date.

3 Section 103 Rejections

4 Claims 1, 2, 4, 5, 9-15, 20, 21 and 26 were rejected under 35 U.S.C.
5 §103(a) as being unpatentable over U.S. Patent No. 20020013910, hereinafter
6 “Edery” in view of U.S. Pat. No. 5,960,170 hereinafter “Chen.” In response, the
7 Applicant respectfully traverses the rejection.

8
9 **Claim 1** recites a processor-readable medium comprising processor-
executable instructions for:

- 10 • parsing an input file to recognize a file format of the input file,
11 **wherein the parsing repeatedly parses once with each of a**
12 **plurality of component parsers contained within a compound**
13 **parser, wherein each of the plurality of component parsers is**
14 **configured for recognition of a specific file format by which an**
15 **input file is configured, wherein the compound parser is**
16 **extensible, and wherein extending the compound parser**
17 **comprises adding an additional component parser;**
- 18 • checking contents of the input file, according to the recognized file
19 format, to determine whether executable code exists within the input
20 file, wherein the checking comprises **detecting executable code**
21 **because its location within the input file is inconsistent with the**
22 **recognized file format;**
- 23 • continuing to parse the input file with all remaining component
24 parsers after at least one component parser recognizes the file format
25 of the input file; and
- sending a status in response to results of said checking, wherein
sending a status comprises further instructions for:
 - sending a file-has-no-code status when the file format of the
input file was recognized and no executable code was found;
 - sending a file-has-code status when executable code was found;
 - **sending a don't-know status when the file format of the input**
file was not recognized.

1 Claim 1 recites, “wherein the parsing repeatedly parses once with each of a
2 plurality of component parsers contained within a compound parser”. The
3 Applicant respectfully submits that the prior art of record does not teach such a
4 parsing method, in which a compound parser comprising component parsers is
5 utilized.

6 In a related matter prior to amendment of Claim 1, the Patent Office
7 pointed to Chen at column 7, lines 20-25, and suggested that Chen might make
8 such a teaching.

9 However, as discussed in the Examiner Interview, the Chen reference
10 teaches that a “plurality of *virus detection objects*” (emphasis added) are produced
11 by the server and sent to the client. This is in contrast to the *file type detection*
12 *function* recited by the Applicant’s Claim 1.

13 The Patent Office also points to Chen at the bottom column 7 and the top of
14 column 8, wherein Chen discusses that based on “platform or file type” (column 8,
15 line 2) the virus detection software could “tailored” (column 7, line 65). The
16 Applicant respectfully submits that this is distinguished from Claim 1 at least
17 because Chen does not teach *how* the file type is determined. The Applicant
18 recites detail in Claim 1 as to *how* the file type is determined (e.g. using a
19 compound parser, having plural component parsers, each component parser
20 configured to recognize one specific file type).

21 Claim 1 additionally recites, “sending a don’t-know status when the file
22 format of the input file was not recognized.” The Applicant submits that Edery
23 and Chen, taken singly or in combination, fail to teach or suggest a ‘don’t know’
24 status in response to failure to recognize a file format.

1 The Patent Office points to Edery at paragraph [0088], suggesting that a
2 “don’t know” status is sent when a format of an input file is not recognized. The
3 Applicant respectfully disagrees.

4 Referring to Edery at [0088], the first two sentences (first 7 lines) discuss
5 file inflation (i.e. decompressing a file). Referring to Fig. 5, the file inflator 504 is
6 configured to de-compress a file.

7 The third sentence, lines 7—11 of [0088], discuss that a compressed meta
8 file may include nested file type information not otherwise reliably provided in an
9 overall file header. In such circumstances, the file inflator 504 returns that
10 information to the parser 502.

11 In the fourth and final sentence in Edery’s paragraph [0088], Edery
12 discloses that the file inflator 504 also provides executable files to the control
13 block 506, where they may be packaged with an MPC or policies.

14 Therefore, the Applicant submits that a careful review of Edery’s paragraph
15 [0088] indicates no disclosure of “sending a don’t-know status when the file
16 format of the input file was not recognized”. In fact, Edery does not address
17 failure to recognize a file format of an input file. Accordingly, Edery does not
18 address sending a “don’t know” status.

19 Chen is not cited for teaching “don’t know” in response to a failure to
20 determine a file format, and the Applicant respectfully submits that Chen fails to
21 remedy the failings of Edery.

22 Claim 1 additionally recites, “the compound parser is extensible, and
23 wherein extending the compound parser comprises adding an additional
24 component parser”. The Applicant respectfully submits that the prior art of record
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1 fails to teach or suggest such a compound parser made up of a plurality of
2 component parsers.

3 The Patent Office points to Chen, and suggests that Chen teaches
4 extensibility at column 7 lines 20-25, wherein Chen teaches that a plurality of
5 virus detection objects are produced. The Applicant respectfully submits that such
6 objects are not ever collectively assembled to form a compound object. Moreover,
7 they do not serve a parsing function, as recited.

8 Claim 1 additionally recites, “detecting executable code because its location
9 within the input file is inconsistent with the recognized file format”. (See the
10 Applicant’s paragraph [0028] and other locations.

11 The Applicant submits that Edery and Chen, taken singly or in
12 combination, fail to teach or suggest that the known and/or expected organization
13 of a recognized file format can be used to find executable code.

14 Edery teaches file type detection (see Edery at [0086]). However, Edery is
15 looking for files with executable extensions like “exe”. Thus, Edery is looking for
16 “whether the potential-Downloadable (likely) is or includes an executable file
17 type” (first sentence in [0086]). But, Edery doesn’t teach “detecting executable
18 code *because its location within the input file is inconsistent with the recognized*
19 *file format*” (emphasis added).

20 Chen teaches that that anti-virus information can be limited if the file type
21 is known (last two lines of column 7 and top 2 lines of column 8). However, Chen
22 fails to teach or suggest any specifics whereby executable code is recognized
23 based on file type. Specifically, Chen fails to teach or suggest that executable
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1 code is recognized based on its location within the input file, which is inconsistent
2 with the file type of that input file.

3 Claim 1 additionally recites, “parsing an input file to recognize a file format
4 of the input file, wherein the parsing repeatedly parses with a plurality of
5 component parsers contained within an extensible parser”.

6 The Applicant submits, *inter alia*, that Edery does not recognize a file’s
7 format using component parsers contained in an extensible parser. The Applicant
8 further submits that, at most, Edery discloses components 551, 552 that are
9 configured to detect *file content*, not to *recognize a file format*.

10 Referring to Fig. 5, [0086] and [0087] of the Edery reference, Edery
11 discloses that a file type detector 503 determines whether a file is, or includes, an
12 executable file type (see [0086] first 3 lines). Referring to Fig. 5, Edery does *not*
13 disclose that detector 503 includes a plurality of component parsers within an
14 extensible parser, as recited by Claim 1. The detector is configured to analyze the
15 file header (see [0086] next 7 lines). Edery discloses that the headers of
16 compressed files, such as zipped files, can also be examined, to determine if
17 executable code and/or file types are included ([0086] next several lines).
18 Additionally, the detector examines file delimiters such as “.exe” to determine if
19 executable code is present.

20 Accordingly, Edery discloses that the file type detector 503 detects files
21 that have, or likely have, executable code ([0086], first several lines). However,
22 Edery’s file type detector 503 is not configured to repeatedly parse with a plurality
23 of component parsers contained within an extensible parser. The use of
24 component parsers to recognize a file format is not disclosed by Edery.
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1 Referring to paragraph [0092] and Fig. 5 of the Edery reference, Edery
2 discloses a content detector 505, configured to provide one or more content
3 analyses, such as distinguishing binary data, pattern data and other data. For
4 example, the content may be analyzed for binary information ([0092] at line 6) by
5 binary detector 551. Additionally, the content may be analyzed for pattern
6 detection by pattern detector 552 ([0092] at line 7).

7 Thus, Edery discloses a content detector that includes plural elements.
8 However, a disclosure of “content analysis” does not anticipate a recitation of “file
9 format recognition”. Edery performs file format recognition at 503, thereby
10 showing that “content analysis” is distinct from “file format recognition.” The
11 Applicant has recited, “parsing an input file *to recognize a file format* of the input
12 file, wherein the parsing the input file repeatedly parses with *a plurality of*
13 *component parsers* contained within an extensible parser” (emphasis added). The
14 recitation by Claim 1 of components *to recognize a file format* is not anticipated
15 by the Edery disclosure of *a content detector* having two or more component parts.
16 That is, the Applicant recites, “recognizing a file format” while Edery discloses,
17 “content detection”. The Applicant respectfully submits that, for at least this
18 reason, that Edery does not fairly anticipate the Applicant’s claim.

19 Notwithstanding the above remarks, the Patent Office suggests that Edery
20 discloses component parsers within an extensible parser (see Office Action mailed
21 06/29/2007, page 3, rejection of Claim 4 (now incorporated by amendment into
22 Claim 1)). In particular, the Patent Office points to Edery at [0086], [0087] and
23 [0092] and suggests that Edery discloses component parsers contained within an
24 extensible parser to recognize file format. The Applicant respectfully disagrees.
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1 As noted above, Edery's content detector 505 includes components 551 and
2 552. However, the content detector does not determine a data file format. Recall
3 that a file format is a type of file, such as "jpeg", "PDF" and "doc". Each file
4 format, such as the Microsoft Word "doc" format, has specific conventions
5 regarding data storage. Instead, Edery specifically discloses that the detectors 551
6 and 552 detect binary data and pattern data, respectively (see [0092]). Therefore,
7 while Edery's detector 505 detects binary data and/or data patterns, it does not
8 recognize file format. Instead, Edery recognizes file format at 503 (Fig. 5).

9 Accordingly, the Applicant respectfully submits that, in part due to the
10 proposed claim amendments, the Edery and Chen references do not fairly support
11 a Section 103 rejection, and respectfully requests that the Section 103 rejection be
12 removed.

13 Claim 1 additionally recites, "continuing to parse the input file with all
14 remaining component parsers after at least one component parser recognizes the
15 file format of the input file". As discussed in the Examiner interview, the Edery
16 reference does not show or disclose such continued parsing, as recited, wherein the
17 parsing is based on recognizing file formats.

18 In rejecting Claims 11 and 12 (now incorporated in Claim 1) the Patent
19 Office pointed to Edery at paragraphs [0092] and [0093].

20 However, a review of Edery, generally and at these locations, does not
21 reveal a disclosure of the use of an extensible and compound parser organized so
22 that each component parser is associated with a particular file type (e.g. a DWG
23 file type). Instead, Edery discloses the use of "binary" and "pattern" "detectors"
24 wherein each detector is not associated with recognition of an individual file type.
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1 Accordingly, Edery does not disclose the compound parser as recited, having
2 component parsers associated with individual file types.

3 Without passing judgment on the allowability of Claim 1 prior to
4 amendment, but in view of the claim amendments and arguments presented above,
5 the Applicant respectfully submits that the Edery and Chen references do not fairly
6 support a Section 103 rejection, and respectfully requests that the Section 103
7 rejection be removed.

8 **Claims 6-8 and 13** depend from Claim 1 and are allowable due to their
9 dependence from an allowable base claim. These claims are also allowable for
10 their own recited features that, in combination with those recited in Claim 1, are
11 not taught and not suggested in references of record, either singly or in
12 combination with one another.

13 **Claim 14** recites a method of detecting code-free files, comprising:

- 14 • **identifying a new file format, wherein ability to recognize the**
15 **new file format is functionality to be extended to a compound**
16 **parser;**
- 17 • **configuring a new component parser according to the new file**
18 **format, wherein the new component parser is configured to**
19 **recognize files of the new format and also to recognize**
20 **executable code in files of the new format by locating executable**
21 **code that is inconsistent with the new file format; and**
- 22 • **extending functionality of the compound parser by adding the**
23 **new component parser to the compound parser;**
- 24 • wherein the compound parser, having extended functionality, is
25 configured to operate to parse an input file by:
 - parsing the input file with the compound parser, wherein the
compound parser is configured to include a plurality of
component parsers, **wherein each component parser is**
configured to recognize a specific data file format;
 - analyzing contents of the input file according to the recognized
specific file format, where available, to determine if the input file
contains executable code; and

- sending a status in response to results of said analyzing.

Claim 14 has been amended in a manner consistent with the disclosure at the Applicant's Fig. 6 and other locations. As discussed in the Examiner's Interview, this subject matter is not taught or suggested by the prior art of record. Accordingly, the Applicant respectfully submits that he Section 103 rejection is overcome.

Claim 14 is also allowable for at least the reasons Claim 1 is allowable, and the remarks and arguments from above are incorporated herein by reference.

Claims 15—20 depend from Claim 14 and are allowable due to their dependence from an allowable base claim. These claims are also allowable for their own recited features that, in combination with those recited in Claim 14, are not shown and not disclosed in references of record, either singly or in combination with one another.

Claim 21 recites an apparatus for detecting code-free files, comprising:

- a compound parser configured to repeatedly parse an input file, wherein each component parser within the compound parser is configured to recognize executable code within a specific file format selected from among a group of data file formats; and
- **a controller to examine success of each of the component parsers to recognize the specific file format for which it was configured to recognize** and to find executable code within the input file, wherein the controller is configured to send a status in response to results of said checking, wherein sending a status comprises:
 - sending a file-has-no-code status when the file format of the input file was recognized and no executable code was found;
 - sending a file-has-code status when executable code was found;
 - **sending a don't-know status when the file format of the input file was not recognized.**

1 Claim 21 recites aspects also recited by Claims 1 and 14, and is allowable
2 for at least the reasons discussed above with those claims. Accordingly, the
3 remarks and arguments from above are incorporated herein.

4 In particular, Claim 21 recites, “sending a don’t-know status when the file
5 format of the input file was not recognized”. The Applicant respectfully submits
6 that Edery does not disclose a “don’t know” status indicating that an input file
7 format was not recognized.

8 The Patent Office points to Edery at paragraph [0088], suggesting that a
9 “don’t know” status is sent when a format of an input file is not recognized. The
10 Applicant respectfully disagrees.

11 Referring to Edery at [0088], the first two sentences (first 7 lines) discuss
12 file inflation (i.e. decompressing a file). Referring to Fig. 5, the file inflator 504 is
13 configured to de-compress a file.

14 The third sentence, lines 7—11 of [0088], discuss that a compressed meta
15 file may include nested file type information not otherwise reliably provided in an
16 overall file header. In such circumstances, the file inflator 504 returns that
17 information to the parser 502.

18 In the fourth and final sentence in Edery’s paragraph [0088], Edery
19 discloses that the file inflator 504 also provides executable files to the control
20 block 506, where they may be packaged with an MPC or policies.

21 Therefore, the Applicant submits that a careful review of Edery’s paragraph
22 [0088] indicates no disclosure of “sending a don’t-know status when the file
23 format of the input file was not recognized”. In fact, Edery does not address
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1 failure to recognize a file format of an input file. Accordingly, Edery does not
2 address sending a “don’t know” status.

3 In view of the above, the Applicant respectfully requests that the Section
4 102 rejection be removed.

5 **Claims 23—29** depend from Claim 21 and are allowable due to their
6 dependence from an allowable base claim. These claims are also allowable for
7 their own recited features that, in combination with those recited in Claim 21, are
8 not shown and not disclosed in references of record, either singly or in
9 combination with one another.

10 **Conclusion**

11 The Applicant submits that the amended claims are in an allowable
12 condition, and requests that the Examiner call the undersigned representative, so
13 that any remaining issues can be resolved.

14 Respectfully Submitted,
15

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